

**In the Claims:**

Please amend the claims as shown:

**Claims:**

1.(Currently amended)            Use of a compound comprising the following amino acid sequence



wherein  $X_1$  is an amino acid, except of C,

$X_2$  is an amino acid, except of C,

$X_3$  is an amino acid, except of C,

$X_4$  is an amino acid, except of C,

$X_5$  is an amino acid, except of C,

$X_6$  is an amino acid, except of C,

and wherein  $X_1X_2X_3X_4X_5X_6$  is not DAEFRH (**SEQ ID NO: 1**), said compound having a binding capacity to an antibody being specific for the natural N-terminal A $\beta$ 42 sequence DAEFRH (**SEQ ID NO: 1**), and 5-mers thereof having a binding capacity to said antibody being specific for the natural N-terminal A $\beta$ 42 sequence DAEFRH (**SEQ ID NO: 1**), for the preparation of a vaccine for Alzheimer's disease (AD).

2. (Currently amended)            Use according to claim 1 characterised in that said compound comprises or is consisting of a peptide, wherein

$X_1$  is G or an amino acid with a hydroxy group or a negatively charged amino acid, preferably E, Y, S or D,

$X_2$  is a hydrophobic amino acid or a positively charged amino acid, preferably I, L, V, K, W, R, Y, F or A,

$X_3$  is a negatively charged amino acid, preferably D or E,

X<sub>4</sub> is an aromatic amino acid or L, preferably Y, F or L,

X<sub>5</sub> is H, K, Y, F or R, preferably H, F or R, and

X<sub>6</sub> is S, T, N, Q, D, E, R, I, K, Y, or G, preferably T, N, D, R, I or G,

especially EIDYHR (SEQ ID NO: 91), ELDYHR (SEQ ID NO: 92), EVDYHR (SEQ ID NO: 93), DIDYHR (SEQ ID NO: 94), DLDYHR (SEQ ID NO: 95), DVDYHR (SEQ ID NO: 96), DIDYRR (SEQ ID NO: 97), DLDYRR (SEQ ID NO: 98), DVDYRR (SEQ ID NO: 99), DKELRI (SEQ ID NO: 100), DWELRI (SEQ ID NO: 101), YREFFI (SEQ ID NO: 119), YREFRI (SEQ ID NO: 102), YAEFRG (SEQ ID NO: 103), EAEFRG (SEQ ID NO: 104), DYEFRG (SEQ ID NO: 105), ELEFRG (SEQ ID NO: 106), DRELRI (SEQ ID NO: 107), DKELKI (SEQ ID NO: 108), DRELKI (SEQ ID NO: 109), GREFRN (SEQ ID NO: 110), EYEFRG (SEQ ID NO: 111), DWEFRDA (SEQ ID NO: 112), SWEFRT (SEQ ID NO: 113), DKELR (SEQ ID NO: 114) or SFEFRG (SEQ ID NO: 115).

3. (Original) Use according to claim 1 or 2 characterised in that the compound is a polypeptide comprising 5 to 15 amino acid residues.

4. (Original) Use according to any of claims 1 to 3 characterised is that the compound is coupled to a pharmaceutically acceptable carrier, preferably KLH, and optionally aluminium hydroxide.

5. (Original) Use according to any one of the claims 1 to 4 characterised in that it contains the compound in an amount of 0,1 ng to 10 mg, preferable 10 ng to 1 mg, especially 100 ng to 100 µg.

6. (Currently Amended) Method for isolating a compound binding to an antibody being specific for the natural N-terminal A $\beta$ 42 sequence DAEFRH (SEQ ID NO: 1) comprising the steps of

- providing a peptide compound library comprising peptides containing the following amino acid sequence

$X_1X_2X_3X_4X_5X_6$ ,

wherein  $X_1$  is an amino acid, except of C,

$X_2$  is an amino acid, except of C,

$X_3$  is an amino acid, except of C,

$X_4$  is an amino acid, except of C,

$X_5$  is an amino acid, except of C,

$X_6$  is an amino acid, except of C,

and wherein  $X_1X_2X_3X_4X_5X_6$  is not DAEFRH **(SEQ ID NO: 1)**,

- contacting said peptide library with said antibody and
- isolating those members of the peptide library which bind to said antibody.

7. (Original) Method according to claim 6, characterised in that said peptides are provided in individualised form in said library, especially immobilised on a solid surface.

8. (Original) Method according to claim 6 or 7, characterised in that said antibody comprises a suitable marker which allows its detection or isolation when bound to a peptide of the library.

9. Vaccine against Alzheimer's Disease comprising an antigen which includes at least one peptide selected from the group EIDYHR **(SEQ ID NO: 91)**, ELDYHR **(SEQ ID NO: 92)**, EVDYHR **(SEQ ID NO: 93)**, DIDYHR **(SEQ ID NO: 94)**, DLDYHR **(SEQ ID NO: 95)**, DVDYHR **(SEQ ID NO: 96)**, DIDYRR **(SEQ ID NO: 97)**, DLDYRR **(SEQ ID NO: 98)**, DVDYRR **(SEQ ID NO: 99)**, DKELRI **(SEQ ID NO: 100)**, DWELRI **(SEQ ID NO: 101)**, YREFRI **(SEQ ID NO: 102)**, YAEFRG **(SEQ ID NO: 103)**, EAEFRG **(SEQ ID NO: 104)**, DYEFRG **(SEQ ID NO: 105)**, ELEFRG **(SEQ ID NO: 106)**, DRELRI **(SEQ ID NO: 107)**, DKELKI **(SEQ ID NO: 108)**, DRELKI **(SEQ ID NO: 109)**, GREFRN **(SEQ ID NO: 110)**, EYEFRG **(SEQ ID NO: 111)**, DWEFRDA **(SEQ ID NO: 112)**, SWEFRT **(SEQ ID NO: 113)**, DKELR **(SEQ ID NO: 114)** or SFEFRG **(SEQ ID NO: 115)**.